



RW

RAW SEQUENCE LISTING **ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/786,675

Source: PCR 09

Date Processed by STIC: 7/5/2001

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 - 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 09/786,675

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino
 Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences
 (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 This sequence is intentionally skipped

 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 Skipped Sequences
 (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
 <210> sequence id number
 <400> sequence id number
 000
- 9 Use of n's or Xaa's
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
 Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
 In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 Invalid <213>
 Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 Use of <220> Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
 Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

PCT

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/786,675

DATE: 07/05/2001

TIME: 15:50:07

Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

Does Not Comply
Corrected Diskette Needed

3 <110> APPLICANT: Cahoon, Rebecca E.
 4 Miao, Gou-Hau
 5 Powell, Wayne
 7 <120> TITLE OF INVENTION: Plant Farnesyltransferases
 9 <130> FILE REFERENCE: BB-1240
 11 <140> CURRENT APPLICATION NUMBER: US/09/786,675
 12 <141> CURRENT FILING DATE: 2001-06-04
 14 <150> PRIOR APPLICATION NUMBER: 60/099,521
 W--> 15 <151> PRIOR FILING DATE: September 8, 1998
 17 <160> NUMBER OF SEQ ID NOS: 23
 19 <170> SOFTWARE: Microsoft Office 97

1998-09-08 ← use this date format

ERRORED SEQUENCES

52 <210> SEQ ID NO: 2
 53 <211> LENGTH: 326
 54 <212> TYPE: PRT
 55 <213> ORGANISM: Zea mays
 57 <400> SEQUENCE: 2
 58 Met Glu His Thr Lys Ser Gly Pro Ser Ser Trp Pro Glu Leu Ala Asp
 59 1 5 10 15
 61 Val Val Pro Val Pro Gln Asp Asp Gly Pro Ser Pro Val Val Ser Ile
 E--> 62 20 25 30
 64 Ala Tyr Arg Asp Asp Phe Arg Glu Val Met Asp Tyr Phe Arg Ala Leu
 E--> 65 35 40 45
 67 Tyr Leu Thr Gly Glu Arg Ser Pro Arg Ala Leu Arg Leu Thr Ala Glu
 E--> 68 50 55 60
 70 Ala Ile Glu Leu Asn Pro Gly Asn Tyr Thr Val Trp His Phe Arg Arg
 E--> 71 65 70 75 80
 73 Leu Ile Leu Glu Ser Leu Asp Phe Asp Leu Leu Glu Met Lys Phe
 E--> 74 85 90 95
 76 Val Glu Lys Ile Ala Glu Cys Asn Pro Lys Asn Tyr Gln Ile Trp His
 E--> 77 100 105 110
 79 His Lys Arg Trp Leu Ala Glu Lys Leu Gly Pro Gly Ile Ala Asn Lys
 E--> 80 115 120 125
 82 Glu His Glu Phe Thr Met Lys Ile Leu Ala Ile Asp Ala Lys Asn Tyr
 E--> 83 130 135 140
 85 His Ala Trp Ser His Arg Gln Trp Val Leu Gln Ala Leu Gly Gly Trp
 E--> 86 145 150 155 160
 88 Glu Thr Glu Leu Glu Tyr Cys Asp His Leu Leu Lys Glu Asp Val Phe
 E--> 89 165 170 175
 91 Asn Asn Ser Ala Trp Asn Gln Arg Tyr Phe Val Ile Thr Arg Ser Pro
 E--> 92 180 185 190
 94 Phe Leu Gly Gly Leu Ala Ala Met Arg Asp Ser Glu Val Asp Tyr Thr
 E--> 95 195 200 205
 97 Ile Glu Ala Ile Leu Ala Asn Ala Gln Asn Glu Ser Pro Trp Arg Tyr

Misaligned,
 amino acid
 numbers -
 (see item 3
 on Enon
 summary
 sheet)
 (global error)

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DATE: 07/05/2001

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Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

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E--> 98 210          215          220
      100 Leu Lys Gly Leu Tyr Lys Gly Glu Asn Asn Leu Leu Val Glu Asp Glu
E--> 101 225          230          235          240
      103 Arg Ile Ser Ala Val Cys Phe Lys Val Leu Lys Asn Asp Trp Thr Cys
E--> 104 245          250          255
      106 Val Phe Ala Leu Ser Leu Leu Asp Leu Leu Cys Thr Gly Leu Gln
E--> 107 260          265          270
      109 Pro Ser Asp Glu Leu Arg Ser Thr Leu Glu Thr Ile Arg Ser Ser His
E--> 110 275          280          285
      112 Pro Glu Thr Ala Asp Asp Asp Pro Ala Ala Ala Val Cys Cys Ile Leu
E--> 113 290          295          300
      115 Gln Lys Cys Asp Pro Leu Arg Val Asn Tyr Trp Ser Trp Phe Lys Asp
E--> 116 305          310          315          320
      118 Thr Leu Ser Gln Ile Ser
E--> 119 325
      149 <210> SEQ ID NO: 4
      150 <211> LENGTH: 339
      151 <212> TYPE: PRT
      152 <213> ORGANISM: Oryza sativa
      154 <400> SEQUENCE: 4
      155 Met Ala Pro Ser Ser Thr Ser Ser Glu Gly Ala Ser Asp Glu Trp Leu
      156 1          5          10          15
      158 Pro Pro Ser Arg Arg Pro Glu Leu Ala Asp Val Val Pro Val Thr Gln
E--> 159 20          25          30
      161 Asp Asp Gly Pro His Pro Val Val Ala Ile Ala Tyr Arg Asp Glu Phe
E--> 162 35          40          45
      164 Arg Glu Val Met Asp Tyr Phe Arg Ala Leu Tyr Phe Ala Gly Glu Arg
E--> 165 50          55          60
      167 Ser Val Arg Ala Leu His Leu Thr Ala Glu Val Ile Asp Leu Asn Pro
E--> 168 65          70          75          80
      170 Gly Asn Tyr Thr Val Trp His Phe Arg Arg Leu Val Leu Glu Ala Leu
E--> 171 85          90          95
      173 Asp Ala Asp Leu Arg Glu Glu Met Asp Phe Val Asp Arg Ile Ala Glu
E--> 174 100         105         110
      176 Cys Asn Pro Lys Asn Tyr Gln Ile Trp His His Lys Arg Trp Leu Ala
E--> 177 115         120         125
      179 Glu Lys Leu Gly Pro Asp Ile Ala Asn Lys Glu His Glu Phe Thr Arg
E--> 180 130         135         140
      182 Lys Ile Leu Ser Met Asp Ala Lys Asn Tyr His Ala Trp Ser His Arg
E--> 183 145         150         155         160
      185 Gln Trp Val Leu Gln Ala Leu Gly Gly Trp Glu Thr Glu Leu Gln Tyr
E--> 186 165         170         175
      188 Cys Asn Gln Leu Leu Glu Glu Asp Val Phe Asn Asn Ser Ala Trp Asn
E--> 189 180         185         190
      191 Gln Arg Tyr Leu Val Ile Thr Ser Ser Pro Leu Leu Gly Gly Leu Ala
E--> 192 195         200         205
      194 Ala Met Arg Asp Ser Glu Val Asp Tyr Thr Val Gly Ala Ile Leu Ala
E--> 195 210         215         220
      197 Asn Pro Gln Asn Glu Ser Pro Trp Arg Tyr Leu Lys Gly Leu Tyr Lys

```

*same
even*

same

DATE: 07/05/2001

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Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

Residue	198	225	230	235	240
E-->	200	Gly Glu Asn Asn Leu	Leu Met Ala Asp Glu	Arg Ile Ser Asp Val	Cys
E-->	201	245	250	255	
	203	Leu Lys Val Leu Lys	His Asp Ser Thr Cys	Val Phe Ala Leu Ser	Leu
E-->	204	260	265	270	
	206	Leu Leu Asp Leu Leu	Gln Ile Gly Leu Gln	Pro Ser Asp Glu Leu	Lys
E-->	207	275	280	285	
	209	Gly Thr Ile Glu Ala	Ile Lys Asn Ser Asp	Pro Glu Ala Asp Glu	Ala
E-->	210	290	295	300	
	212	Val Asp Ala Asp Leu	Ala Thr Ala Ile Cys	Ser Ile Leu Gln Arg	Cys
E-->	213	305	310	315	320
	215	Asp Pro Leu Arg Ile	Asn Tyr Trp Ser Trp	Tyr Arg Thr Thr Ile	Ser
E-->	216	325	330	335	
	218	Ser Gln Thr			
	250	<210> SEQ ID NO: 6			
	251	<211> LENGTH: 346			
	252	<212> TYPE: PRT			
	253	<213> ORGANISM: Glycine max			
	255	<400> SEQUENCE: 6			
	256	Met Glu Ser Gly Ser Ser	Glu Gly Glu Glu Val	Gln Gln Arg Val	Pro
	257	1	5	10	15
	259	Leu Arg Glu Arg Val	Glu Trp Ser Asp Val	Thr Pro Val Pro	Gln Asn
E-->	260	20	25	30	
	262	Asp Gly Pro Asn Pro	Val Val Pro Ile Gln	Tyr Thr Glu Glu	Phe Ser
E-->	263	35	40	45	
	265	Glu Val Met Asp Tyr	Phe Arg Ala Val Tyr	Leu Thr Asp Glu	Arg Ser
E-->	266	50	55	60	
	268	Pro Arg Ala Leu Ala	Leu Thr Ala Glu Ala	Val Gln Phe Asn	Ser Gly
E-->	269	65	70	75	80
	271	Asn Tyr Thr Val Trp	His Phe Arg Arg Leu	Leu Leu Glu Ser	Leu Lys
E-->	272	85	90	95	
	274	Val Asp Leu Asn Asp	Glu Leu Asp Phe Val	Glu Arg Met Ala	Ala Gly
E-->	275	100	105	110	
	277	Asn Ser Lys Asn Tyr	Gln Met Trp His His	Arg Arg Trp Val	Ala Glu
E-->	278	115	120	125	
	280	Lys Leu Gly Pro Glu	Ala Arg Asn Asn Glu	Leu Glu Phe Thr	Lys Lys
E-->	281	130	135	140	
	283	Ile Leu Ser Val Asp	Ala Lys His Tyr His	Ala Trp Ser His	Arg Gln
E-->	284	145	150	155	160
	286	Trp Ala Leu Gln Thr	Leu Gly Gly Trp Glu	Asp Glu Leu Asn	Tyr Cys
E-->	287	165	170	175	
	289	Thr Glu Leu Leu Lys	Glu Asp Ile Phe Asn	Asn Ser Ala Trp	Asn Gln
E-->	290	180	185	190	
	292	Arg Tyr Phe Val Ile	Thr Arg Ser Pro Phe	Leu Gly Gly Leu	Lys Ala
E-->	293	195	200	205	
	295	Met Arg Glu Ser Glu	Val Leu Tyr Thr Ile	Glu Ala Ile Ile	Ala Tyr
E-->	296	210	215	220	
	298	Pro Glu Asn Glu Ser	Ser Trp Arg Tyr Leu	Arg Gly Leu Tyr	Lys Gly
E-->	299	225	230	235	240

same

same

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Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

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301 Glu Thr Thr Ser Trp Val Asn Asp Pro Gln Val Ser Ser Val Cys Leu
E--> 302 245          250          255
304 Lys Ile Leu Arg Thr Lys Ser Asn Tyr Val Phe Ala Leu Ser Thr Ile
E--> 305 260          265          270
307 Leu Asp Leu Ile Cys Phe Gly Tyr Gln Pro Asn Glu Asp Ile Arg Asp
E--> 308 275          280          285
310 Ala Ile Asp Ala Leu Lys Thr Ala Asp Met Asp Lys Gln Asp Leu Asp
E--> 311 290          295          300
313 Asp Asp Glu Lys Gly Glu Gln Gln Asn Leu Asn Ile Ala Arg Asn Ile
E--> 314 305          310          315          320
316 Cys Ser Ile Leu Lys Gln Val Asp Pro Ile Arg Thr Asn Tyr Trp Ile
E--> 317 325          330          335
319 Trp Arg Lys Ser Arg Leu Pro Leu Ser Ala
E--> 320 340          345
352 <210> SEQ ID NO: 8
353 <211> LENGTH: 358
354 <212> TYPE: PRT
355 <213> ORGANISM: Glycine max
357 <400> SEQUENCE: 8
358 Met Glu Ser Gly Ser Ser Glu Gly Glu Glu Val Gln Gln Arg Val Pro
359 1          5          10          15
361 Leu Arg Glu Arg Val Glu Trp Ser Asp Val Thr Pro Val Pro Gln Asn
E--> 362 20          25          30
364 Asp Gly Pro Asn Pro Val Val Pro Ile Gln Tyr Thr Glu Glu Phe Ser
E--> 365 35          40          45
367 Glu Val Met Asp Tyr Phe Arg Ala Val Tyr Leu Thr Asp Glu Arg Ser
E--> 368 50          55          60
370 Pro Arg Ala Leu Ala Leu Thr Ala Glu Ala Val Gln Phe Asn Ser Gly
E--> 371 65          70          75          80
373 Asn Tyr Thr Val Trp His Phe Arg Arg Leu Leu Leu Glu Ser Leu Lys
E--> 374 85          90          95
376 Val Asp Leu Asn Asp Glu Leu Glu Phe Val Glu Arg Met Ala Ala Gly
E--> 377 100         105         110
379 Asn Ser Lys Asn Tyr Gln Met Trp Cys Asp Ala Leu Leu Cys Ser Phe
E--> 380 115         120         125
382 Phe His Thr Leu His His Arg Arg Trp Val Ala Glu Lys Leu Gly Pro
E--> 383 130         135         140
385 Glu Ala Arg Asn Asn Glu Leu Glu Phe Thr Lys Lys Ile Leu Ser Val
E--> 386 145         150         155         160
388 Asp Ala Lys His Tyr His Ala Trp Ser His Arg Gln Trp Ala Leu Gln
E--> 389 165         170         175
391 Thr Leu Gly Gly Trp Glu Asp Glu Leu Asn Tyr Cys Thr Glu Leu Leu
E--> 392 180         185         190
394 Lys Glu Asp Ile Phe Asn Asn Ser Ala Trp Asn Gln Arg Tyr Phe Val
E--> 395 195         200         205
397 Ile Thr Arg Ser Pro Phe Leu Gly Gly Leu Lys Ala Met Arg Glu Ser
E--> 398 210         215         220
400 Glu Val Leu Tyr Thr Ile Glu Ala Ile Ile Ala Tyr Pro Glu Asn Glu
E--> 401 225         230         235         240

```

*same**same*

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Output Set: N:\CRF3\07032001\I786675.raw

```

      403 Ser Ser Trp Arg Tyr Leu Arg Gly Leu Tyr Lys Gly Glu Thr Thr Ser
E--> 404 245                250                255
      406 Trp Val Asn Asp Pro Gln Val Ser Ser Val Cys Leu Lys Ile Leu Arg
E--> 407 260                265                270
      409 Thr Lys Ser Asn Tyr Val Phe Ala Leu Ser Thr Ile Leu Asp Leu Ile
E--> 410 275                280                285
      412 Cys Phe Gly Tyr Gln Pro Asn Glu Asp Ile Arg Asp Ala Ile Asp Ala
E--> 413 290                295                300
      415 Leu Lys Thr Ala Asp Met Asp Lys Gln Asp Leu Asp Asp Asp Glu Lys
E--> 416 305                310                315                320
      418 Gly Glu Gln Gln Asn Leu Asn Ile Ala Arg Asn Ile Cys Ser Ile Leu
E--> 419 325                330                335
      421 Lys Gln Val Asp Pro Ile Arg Thr Asn Tyr Trp Ile Trp Arg Lys Ser
E--> 422 340                345                350
      424 Arg Leu Pro Leu Ser Ala
E--> 425 355
      457 <210> SEQ ID NO: 10
      458 <211> LENGTH: 309
      459 <212> TYPE: PRT
      460 <213> ORGANISM: Triticum aestivum
      462 <400> SEQUENCE: 10
      463 Asp Val Ala Pro Leu Pro Gln Ala Asp Gly Pro Cys Pro Val Val Ser
      464 1          5          10          15
      466 Ile Ala Tyr Arg Gly Asp Phe Arg Glu Val Met Asp Tyr Phe Arg Ala
E--> 467 20          25          30
      469 Leu Tyr Ala Ala Gly Glu Arg Ser Pro Arg Ala Leu Arg Leu Thr Ala
E--> 470 35          40          45
      472 Asp Ala Ile His Leu Asn Pro Gly Asn Tyr Thr Val Trp His Phe Arg
E--> 473 50          55          60
      475 Arg Val Val Leu Glu Ala Leu Asp Ala Asp Leu Leu Leu Glu Met His
E--> 476 65          70          75          80
      478 Phe Val Asp Gln Ile Ala Glu Ser Asn Pro Lys Asn Tyr Gln Val Trp
E--> 479 85          90          95
      481 His His Lys Arg Trp Leu Ala Glu Lys Ile Gly Pro Asp Ala Ala Asn
E--> 482 100         105         110
      484 Ser Glu His Asp Phe Thr Arg Lys Ile Leu Ala Met Asp Ala Lys Asn
E--> 485 115         120         125
      487 Tyr His Ala Trp Ser His Arg Gln Trp Val Leu Gln Ala Leu Gly Gly
E--> 488 130         135         140
      490 Trp Glu Ser Glu Leu Gln Tyr Cys Asn Gln Leu Leu Glu Glu Asp Val
E--> 491 145         150         155         160
      493 Phe Asn Asn Ser Ala Trp Asn Gln Arg Tyr Leu Val Val Thr Arg Ser
E--> 494 165         170         175
      496 Pro Ile Leu Gly Gly Leu Ala Ala Met Arg Asp Ser Glu Val Asp Tyr
E--> 497 180         185         190
      499 Thr Val Glu Ala Ile Met Val Asn Pro Gln Asn Glu Ser Pro Trp Arg
E--> 500 195         200         205
      502 Tyr Leu Arg Gly Leu Tyr Lys Asp Asp Asn Asn Leu Leu Val Ala Asp
E--> 503 210         215         220

```

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Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

505 Asn Arg Ile Ser Asp Ala Cys Leu Lys Val Leu Asn Lys Asp Trp Thr
 E--> 506 225 230 235 240
 508 Cys Val Phe Ala Leu Ser Phe Leu Leu Asp Leu Leu Arg Met Gly Leu
 E--> 509 245 250 255
 511 Gln Pro Ser Asn Glu Leu Lys Gly Thr Ile Glu Ala Met Glu Asn Ser
 E--> 512 260 265 270
 514 Asp Pro Glu Thr Gly His Ala Asp Ile Ala Val Ala Val Cys Ser Ile
 E--> 515 275 280 285
 517 Leu Gln Lys Cys Asp Pro Leu Arg Ile Asn Tyr Trp Ser Trp Tyr Gln
 E--> 518 290 295 300
 520 Thr Thr Leu Ser Ser
 E--> 521 305
 553 <210> SEQ ID NO: 12
 554 <211> LENGTH: 452
 555 <212> TYPE: PRT
 556 <213> ORGANISM: Zea mays
 558 <400> SEQUENCE: 12
 559 Met Asp Pro Ser Pro Gln Ser Thr Pro Pro Thr Gly Asp Asp Pro Ala
 560 1 5 10 15
 562 Ala Ala Ala Asp Pro Asp Leu Pro Arg Leu Thr Val Thr Gln Val Glu
 E--> 563 20 25 30
 565 Gln Met Lys Val Glu Ala Arg Val Gly Asp Ile Tyr Arg Ser Leu Phe
 E--> 566 35 40 45
 568 Gly Ala Ala Pro Asn Thr Lys Ser Ile Met Leu Glu Leu Trp Arg Asp
 E--> 569 50 55 60
 571 Gln His Ile Glu Tyr Leu Thr Pro Gly Leu Arg His Met Gly Pro Ala
 E--> 572 65 70 75 80
 574 Phe His Val Leu Asp Ala Asn Arg Pro Trp Leu Cys Tyr Trp Met Val
 E--> 575 85 90 95
 577 His Pro Leu Ala Leu Leu Asp Glu Ala Leu Asp Asp Asp Leu Glu Asn
 E--> 578 100 105 110
 580 Asp Ile Ile Asp Phe Leu Ala Arg Cys Gln Asp Lys Asp Gly Gly Tyr
 E--> 581 115 120 125
 583 Ser Gly Gly Pro Gly Gln Leu Pro His Leu Ala Thr Thr Tyr Ala Ala
 E--> 584 130 135 140
 586 Val Asn Thr Leu Val Thr Ile Gly Ser Glu Arg Ala Leu Ser Ser Ile
 E--> 587 145 150 155 160
 589 Asn Arg Gly Asn Leu Tyr Asn Phe Met Leu Gln Met Lys Asp Val Ser
 E--> 590 165 170 175
 592 Gly Ala Phe Arg Met His Asp Gly Gly Glu Ile Asp Val Arg Ala Ser
 E--> 593 180 185 190
 595 Tyr Thr Ala Ile Ser Val Ala Ser Leu Val Asn Ile Leu Asp Phe Lys
 E--> 596 195 200 205
 598 Leu Ala Lys Gly Val Gly Asp Tyr Ile Ala Arg Cys Gln Thr Tyr Glu
 E--> 599 210 215 220
 601 Gly Gly Ile Ala Gly Glu Pro Tyr Ala Glu Ala His Gly Gly Tyr Thr
 E--> 602 225 230 235 240
 604 Phe Cys Gly Leu Ala Ala Leu Ile Leu Leu Asn Glu Ala Glu Lys Val
 E--> 605 245 250 255

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Output Set: N:\CRF3\07032001\I786675.raw

```

607 Asp Leu Pro Ser Leu Ile Gly Trp Val Ala Phe Arg Gln Gly Val Glu
E--> 608 260 265 270
610 Cys Gly Phe Gln Gly Arg Thr Asn Lys Leu Val Asp Gly Cys Tyr Ser
E--> 611 275 280 285
613 Phe Trp Gln Gly Ala Ala Ile Ala Phe Thr Gln Lys Leu Ile Thr Ile
E--> 614 290 295 300
616 Val Asp Lys Gln Leu Lys Ser Ser Tyr Ser Cys Lys Arg Pro Ser Gly
E--> 617 305 310 315 320
619 Glu Asp Ala Cys Ser Thr Ser Ser Tyr Gly Cys Thr Ala Lys Lys Ser
E--> 620 325 330 335
622 Ser Ser Ala Val Asp Tyr Ala Lys Phe Gly Phe Asp Phe Ile Gln Gln
E--> 623 340 345 350
625 Ser Asn Gln Ile Gly Pro Leu Phe His Asn Ile Ala Leu Gln Gln Tyr
E--> 626 355 360 365
628 Ile Leu Leu Cys Ser Gln Val Leu Glu Gly Gly Leu Arg Asp Lys Pro
E--> 629 370 375 380
631 Gly Lys Asn Arg Asp His Tyr His Ser Cys Tyr Cys Leu Ser Gly Leu
E--> 632 385 390 395 400
634 Ala Val Ser Gln Tyr Ser Ala Met Thr Asp Thr Gly Ser Cys Pro Leu
E--> 635 405 410 415
637 Pro Gln His Val Leu Gly Pro Tyr Ser Asn Leu Leu Glu Pro Ile His
E--> 638 420 425 430
640 Pro Leu Tyr Asn Val Val Leu Asp Lys Tyr His Thr Ala Tyr Glu Phe
E--> 641 435 440 445
643 Phe Ser Glu Glu
E--> 644 450
671 <210> SEQ ID NO: 14
672 <211> LENGTH: 313
673 <212> TYPE: PRT
674 <213> ORGANISM: Oryza sativa
676 <400> SEQUENCE: 14
677 Met Asp Pro Pro Ser Pro Pro Pro Pro Pro Tyr Pro Pro Ala Ala
678 1 5 10 15
680 Ala Glu Gly Gly Pro Ala Ala Asp Ser Gln Ala Ala Glu Leu Pro Arg
E--> 681 20 25 30
683 Leu Thr Val Thr Gln Val Glu Gln Met Lys Val Glu Ala Lys Val Gly
E--> 684 35 40 45
686 Glu Ile Tyr Arg Val Leu Phe Gly Asn Ala Pro Asn Ala Asn Ser Leu
E--> 687 50 55 60
689 Met Leu Glu Leu Trp Arg Glu Gln His Val Glu Tyr Leu Thr Arg Gly
E--> 690 65 70 75 80
692 Leu Lys His Leu Gly Pro Ser Phe His Val Leu Asp Ala Asn Arg Pro
E--> 693 85 90 95
695 Trp Leu Cys Tyr Trp Ile Ile His Ala Leu Ala Leu Leu Asp Glu Ile
E--> 696 100 105 110
698 Pro Asp Asp Val Glu Asp Asp Ile Val Asp Phe Leu Ser Arg Cys Gln
E--> 699 115 120 125
701 Asp Lys Asp Gly Gly Tyr Gly Gly Gly Pro Gly Gln Leu Pro His Leu
E--> 702 130 135 140

```

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DATE: 07/05/2001

PATENT APPLICATION: US/09/786,675

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Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

```

704 Ala Thr Thr Tyr Ala Ala Val Asn Thr Leu Val Thr Ile Gly Ser Glu
E--> 705 145 150 155 160
707 Arg Ala Leu Ser Ser Val Asn Arg Asp Asn Leu Tyr Lys Phe Met Leu
E--> 708 165 170 175
710 Arg Met Lys Asp Thr Ser Gly Ala Phe Arg Met His Asp Gly Gly Glu
E--> 711 180 185 190
713 Ile Asp Val Arg Ala Ser Tyr Thr Ala Ile Ser Val Ala Ser Leu Val
E--> 714 195 200 205
716 Asn Ile Leu Asp Gly Glu Leu Ala Lys Gly Val Gly Asn Tyr Ile Thr
E--> 717 210 215 220
719 Arg Cys Gln Thr Tyr Glu Gly Gly Ile Ala Gly Glu Pro Tyr Ala Glu
E--> 720 225 230 235 240
722 Ala His Gly Gly Tyr Thr Phe Cys Gly Leu Ala Thr Met Ile Leu Leu
E--> 723 245 250 255
725 Asn Glu Val Asp Lys Leu Asp Leu Ala Ser Leu Ile Gly Trp Val Ala
E--> 726 260 265 270
728 Phe Arg Gln Gly Val Glu Cys Gly Phe Gln Gly Arg Thr Asn Lys Leu
E--> 729 275 280 285
731 Val Asp Gly Cys Tyr Ser Phe Trp Gln Gly Ala Ala Leu Ala Leu Thr
E--> 732 290 295 300
734 Val His Arg Val Ala Pro Thr Ala Lys
E--> 735 305 310
770 <210> SEQ ID NO: 16
771 <211> LENGTH: 429
772 <212> TYPE: PRT
773 <213> ORGANISM: Glycine max
775 <400> SEQUENCE: 16
776 Met Val Glu Ser Gln Val Phe Gln Ile Tyr Gln Leu Phe Ala Thr Ile
777 1 5 10 15
779 Pro Arg Asn Ala Gln Thr Leu Met Leu Glu Leu Gln Arg Asp Asn His
E--> 780 20 25 30
782 Met Gln Tyr Val Ser Lys Gly Leu Arg His Leu Ser Ser Ala Phe Ser
E--> 783 35 40 45
785 Val Leu Asp Ala Asn Arg Pro Trp Leu Cys Tyr Trp Ile Phe His Ser
E--> 786 50 55 60
788 Ile Ala Leu Ser Gly Glu Ser Val Asp Asp Glu Leu Glu Asp Asn Ala
E--> 789 65 70 75 80
791 Ile Asp Phe Leu Asn Arg Cys Gln Asp Pro Asn Gly Gly Tyr Ala Gly
E--> 792 85 90 95
794 Gly Pro Gly Gln Met Pro His Ile Ala Thr Thr Tyr Ala Ala Val Asn
E--> 795 100 105 110
797 Ser Leu Ile Thr Leu Gly Gly Glu Lys Ser Leu Ala Ser Ile Asn Arg
E--> 798 115 120 125
800 Asp Lys Leu Tyr Gly Phe Leu Arg Arg Met Lys Gln Pro Asn Gly Gly
E--> 801 130 135 140
803 Phe Arg Met His Asp Glu Gly Glu Ile Asp Val Arg Ala Cys Tyr Thr
E--> 804 145 150 155 160
806 Ala Ile Ser Val Ala Ser Val Leu Asn Ile Leu Asp Asp Glu Leu Ile
E--> 807 165 170 175

```

RAW SEQUENCE LISTING

DATE: 07/05/2001

PATENT APPLICATION: US/09/786,675

TIME: 15:50:07

Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

```

      809 Gln Asn Val Gly Asp Tyr Ile Ile Ser Cys Gln Thr Tyr Glu Gly Gly
E--> 810 180      185      190
      812 Ile Ala Gly Glu Pro Gly Ser Glu Ala His Gly Gly Tyr Thr Phe Cys
E--> 813 195      200      205
      815 Gly Leu Ala Thr Met Ile Leu Ile Gly Glu Val Asn His Leu Asp Leu
E--> 816 210      215      220
      818 Pro Arg Leu Val Asp Trp Val Val Phe Arg Gln Gly Lys Glu Cys Gly
E--> 819 225      230      235      240
      821 Phe Gln Gly Arg Thr Asn Lys Leu Val Asp Gly Cys Tyr Ser Phe Trp
E--> 822 245      250      255
      824 Gln Gly Gly Ala Val Ala Leu Leu Gln Arg Leu Ser Ser Ile Ile Asn
E--> 825 260      265      270
      827 Lys Gln Met Glu Glu Thr Ser Gln Ile Phe Ala Val Ser Tyr Val Ser
E--> 828 275      280      285
      830 Glu Ala Lys Glu Ser Leu Asp Gly Thr Ser Ser His Ala Thr Cys Arg
E--> 831 290      295      300
      833 Gly Glu His Glu Gly Thr Ser Glu Ser Ser Ser Ser Asp Phe Lys Asn
E--> 834 305      310      315      320
      836 Ile Ala Tyr Lys Phe Ile Asn Glu Trp Arg Ala Gln Glu Pro Leu Phe
E--> 837 325      330      335
      839 His Ser Ile Ala Leu Gln Gln Tyr Ile Leu Leu Cys Ala Gln Glu Gln
E--> 840 340      345      350
      842 Glu Gly Gly Leu Arg Asp Lys Pro Gly Lys Arg Arg Asp His Tyr His
E--> 843 355      360      365
      845 Thr Cys Tyr Cys Leu Ser Gly Leu Ser Leu Cys Gln Tyr Ser Trp Ser
E--> 846 370      375      380
      848 Lys His Pro Asp Ser Pro Pro Leu Pro Asn Leu Val Leu Gly Pro Tyr
E--> 849 385      390      395      400
      851 Ser Asn Leu Leu Glu Pro Ile His Pro Leu Phe Asn Val Val Leu Gly
E--> 852 405      410      415
      854 Arg Tyr Arg Glu Ala His Glu Phe Phe Phe Thr Glu Ser
E--> 855 420      425
      881 <210> SEQ ID NO: 18
      882 <211> LENGTH: 141
      883 <212> TYPE: PRT
      884 <213> ORGANISM: Glycine max
      886 <400> SEQUENCE: 18
      887 Asp Thr Asn Pro Ala Ala Ala Pro Pro Cys Pro Thr Val Ser Gln Arg
      888 1      5      10      15
      890 Asp Gln Trp Met Val Glu Ser Gln Val Phe Gln Ile Tyr Gln Leu Phe
E--> 891 20      25      30
      893 Ala Thr Ile Pro Gly Ser Ala Gln Asn Leu Met Leu Glu Leu Gln Arg
E--> 894 35      40      45
      896 Asp Asn His Met Gln Tyr Leu Ser Lys Gly Leu Arg His Leu Ser Ser
E--> 897 50      55      60
      899 Ala Phe Ser Val Leu Asp Ala Asn Arg Pro Trp Leu Cys Tyr Trp Ile
E--> 900 65      70      75      80
      902 Phe His Ser Ile Ala Leu Leu Gly Glu Ser Val Asp Asp Glu Leu Glu
E--> 903 85      90      95

```

RAW SEQUENCE LISTING

DATE: 07/05/2001

PATENT APPLICATION: US/09/786,675

TIME: 15:50:07

Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

905 Asp Asn Thr Ile Asp Phe Leu Asn Arg Cys Gln Asp Pro Asn Gly Gly
 E--> 906 100 105 110
 908 Tyr Ala Gly Gly Pro Gly Gln Met Pro His Ile Ala Thr Thr Tyr Ala
 E--> 909 115 120 125
 911 Ala Val Asn Thr Leu Ile Thr Leu Gly Gly Gln Lys Ser
 E--> 912 130 135 140
 914 <210> SEQ ID NO: 19
 915 <211> LENGTH: 333
 916 <212> TYPE: PRT
 917 <213> ORGANISM: Pisum sativum
 919 <400> SEQUENCE: 19
 920 Met Ala Gly Asn Ile Glu Val Glu Glu Asp Asp Arg Val Pro Leu Arg
 921 1 5 10 15
 923 Leu Arg Pro Glu Trp Ser Asp Val Thr Pro Ile Pro Gln Asp Asp Gly
 E--> 924 20 25 30
 926 Pro Ser Pro Val Val Pro Ile Asn Tyr Ser Glu Glu Phe Ser Glu Val
 E--> 927 35 40 45
 929 Met Asp Tyr Phe Arg Ala Val Tyr Phe Ala Lys Glu Leu Ser Ser Arg
 E--> 930 50 55 60
 932 Ala Leu Ala Leu Thr Ala Glu Ala Ile Gly Leu Asn Ala Gly Asn Tyr
 E--> 933 65 70 75 80
 935 Thr Val Trp His Phe Arg Arg Leu Leu Leu Glu Ser Leu Lys Val Asp
 E--> 936 85 90 95
 938 Leu His Val Glu Arg Glu Phe Val Glu Arg Val Ala Ser Gly Asn Ser
 E--> 939 100 105 110
 941 Lys Asn Tyr Gln Ile Trp His His Arg Arg Trp Val Ala Glu Lys Leu
 E--> 942 115 120 125
 944 Gly Pro Glu Ala Arg Asn Ser Glu Leu Glu Phe Thr Lys Lys Ile Leu
 E--> 945 130 135 140
 947 Ser Val Asp Ala Lys His Tyr His Ala Trp Ser His Arg Gln Trp Val
 E--> 948 145 150 155 160
 950 Leu Gln Asn Leu Gly Gly Trp Glu Asp Glu Leu Ser Tyr Cys Ser Glu
 E--> 951 165 170 175
 953 Leu Leu Ala Glu Asp Ile Phe Asn Asn Ser Ala Trp Asn Gln Arg Tyr
 E--> 954 180 185 190
 956 Phe Val Ile Thr Arg Ser Pro Val Leu Gly Gly Leu Lys Ala Met Arg
 E--> 957 195 200 205
 959 Glu Ser Glu Val Leu Phe Thr Val Glu Ala Ile Ile Ser Tyr Pro Glu
 E--> 960 210 215 220
 962 Asn Glu Ser Ser Trp Arg Tyr Leu Arg Gly Leu Phe Lys Asp Glu Ser
 E--> 963 225 230 235 240
 965 Thr Leu Tyr Val Asn Asp Ala Gln Val Ser Ser Leu Cys Leu Lys Ile
 E--> 966 245 250 255
 968 Leu Lys Thr Lys Ser Asn Tyr Leu Phe Ala Leu Ser Thr Leu Leu Asp
 E--> 969 260 265 270
 971 Leu Ser Ala Ser Val Ile Gln Pro Asn Glu Asp Phe Arg Asp Ala Ile
 E--> 972 275 280 285
 974 Glu Ala Leu Arg Leu Gln Ile Leu Ile Lys Gln Asp Ser Asp Ile Ala
 E--> 975 290 295 300

RAW SEQUENCE LISTING

DATE: 07/05/2001

PATENT APPLICATION: US/09/786,675

TIME: 15:50:07

Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

977 Ile Thr Ile Cys Ser Ile Leu Glu Gln Val Asp Pro Ile Arg Val Asn
 E--> 978 305 310 315 320
 980 Tyr Trp Val Trp Arg Lys Ser Arg Leu Pro Gln Ala Ala
 E--> 981 325 330
 983 <210> SEQ ID NO: 20
 984 <211> LENGTH: 326
 985 <212> TYPE: PRT
 986 <213> ORGANISM: Arabidopsis thaliana
 988 <400> SEQUENCE: 20
 989 Met Asn Phe Asp Glu Thr Val Pro Leu Ser Gln Arg Leu Glu Trp Ser
 990 1 5 10 15
 992 Asp Val Val Pro Leu Thr Gln Asp Asp Gly Pro Asn Pro Val Val Pro
 E--> 993 20 25 30
 995 Ile Ala Tyr Lys Glu Glu Phe Arg Glu Thr Met Asp Tyr Phe Arg Ala
 E--> 996 35 40 45
 998 Ile Tyr Phe Ser Asp Glu Arg Ser Pro Arg Ala Leu Arg Leu Thr Glu
 E--> 999 50 55 60
 1001 Glu Thr Leu Leu Leu Asn Ser Gly Asn Tyr Thr Val Trp His Phe Arg
 E--> 1002 65 70 75 80
 1004 Arg Leu Val Leu Glu Ala Leu Asn His Asp Leu Phe Glu Glu Leu Glu
 E--> 1005 85 90 95
 1007 Phe Ile Glu Arg Ile Ala Glu Asp Asn Ser Lys Asn Tyr Gln Leu Trp
 E--> 1008 100 105 110
 1010 His His Arg Arg Trp Val Ala Glu Lys Leu Gly Pro Asp Val Ala Gly
 E--> 1011 115 120 125
 1013 Arg Glu Leu Glu Phe Thr Arg Arg Val Leu Ser Leu Asp Ala Lys His
 E--> 1014 130 135 140
 1016 Tyr His Ala Trp Ser His Arg Gln Trp Thr Leu Arg Ala Leu Gly Gly
 E--> 1017 145 150 155 160
 1019 Trp Glu Asp Glu Leu Asp Tyr Cys His Glu Leu Leu Glu Ala Asp Val
 E--> 1020 165 170 175
 1022 Phe Asn Asn Ser Ala Trp Asn Gln Arg Tyr Tyr Val Ile Thr Gln Ser
 E--> 1023 180 185 190
 1025 Pro Leu Leu Gly Gly Leu Glu Ala Met Arg Glu Ser Glu Val Ser Tyr
 E--> 1026 195 200 205
 1028 Thr Ile Lys Ala Ile Leu Thr Asn Pro Ala Asn Glu Ser Ser Trp Arg
 E--> 1029 210 215 220
 1031 Tyr Leu Lys Ala Leu Tyr Lys Asp Asp Lys Glu Ser Trp Ile Ser Asp
 E--> 1032 225 230 235 240
 1034 Pro Ser Val Ser Ser Val Cys Leu Asn Val Leu Ser Arg Thr Asp Cys
 E--> 1035 245 250 255
 1037 Phe His Gly Phe Ala Leu Ser Thr Leu Leu Asp Leu Leu Cys Asp Gly
 E--> 1038 260 265 270
 1040 Leu Arg Pro Thr Asn Glu His Lys Asp Ser Val Arg Ala Leu Ala Asn
 E--> 1041 275 280 285
 1043 Glu Glu Pro Glu Thr Asn Leu Ala Asn Leu Val Cys Thr Ile Leu Gly
 E--> 1044 290 295 300
 1046 Arg Val Asp Pro Ile Arg Ala Asn Tyr Trp Ala Trp Arg Lys Ser Lys
 E--> 1047 305 310 315 320

RAW SEQUENCE LISTING

DATE: 07/05/2001

PATENT APPLICATION: US/09/786,675

TIME: 15:50:07

Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

```

1049 Ile Thr Val Ala Ala Ile
E--> 1050 325
1052 <210> SEQ ID NO: 21
1053 <211> LENGTH: 470
1054 <212> TYPE: PRT
1055 <213> ORGANISM: Lycopersicon esculentum
1057 <400> SEQUENCE: 21
1058 Met Glu Ser Arg Lys Val Thr Lys Thr Leu Glu Asp Gln Trp Val Val
1059 1 5 10 15
1061 Glu Arg Arg Val Arg Glu Ile Tyr Asp Tyr Phe Tyr Ser Ile Ser Pro
E--> 1062 20 25 30
1064 Asn Ser Pro Ser Asp Leu Ile Glu Ile Glu Arg Asp Lys His Phe Gly
E--> 1065 35 40 45
1067 Tyr Leu Ser Gln Gly Leu Arg Lys Leu Gly Pro Ser Phe Ser Val Leu
E--> 1068 50 55 60
1070 Asp Ala Ser Arg Pro Trp Leu Cys Tyr Trp Thr Leu His Ser Ile Ala
E--> 1071 65 70 75 80
1073 Leu Leu Gly Glu Ser Ile Gly Gly Lys Leu Glu Asn Asp Ala Ile Asp
E--> 1074 85 90 95
1076 Phe Leu Thr Arg Cys Gln Asp Lys Asp Gly Gly Tyr Gly Gly Gly Pro
E--> 1077 100 105 110
1079 Gly Gln Met Pro His Leu Ala Thr Thr Tyr Ala Ala Val Asn Ser Leu
E--> 1080 115 120 125
1082 Ile Thr Leu Gly Lys Pro Glu Ala Leu Ser Ser Ile Asn Arg Glu Lys
E--> 1083 130 135 140
1085 Leu Tyr Thr Phe Leu Leu Arg Met Lys Asp Ala Ser Gly Gly Phe Arg
E--> 1086 145 150 155 160
1088 Met His Asp Gly Gly Glu Val Asp Val Arg Ala Cys Tyr Thr Ala Ile
E--> 1089 165 170 175
1091 Ser Val Ala Asn Ile Leu Asn Ile Val Asp Asp Glu Leu Ile His Gly
E--> 1092 180 185 190
1094 Val Gly Asn Tyr Ile Leu Ser Cys Gln Thr Tyr Glu Gly Gly Ile Ala
E--> 1095 195 200 205
1097 Gly Glu Pro Gly Ser Glu Ala His Gly Gly Tyr Thr Phe Cys Gly Leu
E--> 1098 210 215 220
1100 Ala Ala Met Ile Leu Ile Asn Glu Val Asp Arg Leu Asp Leu Pro Gly
E--> 1101 225 230 235 240
1103 Leu Ile Asp Trp Val Val Phe Arg Gln Gly Val Glu Gly Gly Phe Gln
E--> 1104 245 250 255
1106 Gly Arg Thr Asn Lys Leu Val Asp Gly Cys Tyr Ser Phe Trp Gln Gly
E--> 1107 260 265 270
1109 Ala Val Val Phe Leu Ile Gln Arg Leu Asn Leu Ile Val His Glu Gln
E--> 1110 275 280 285
1112 Leu Gly Leu Ser Asn Asp Leu Ser Thr Glu Ser Ala Asp Asp Ser Ser
E--> 1113 290 295 300
1115 Glu Ser Glu Leu Ser Asp Glu Glu Glu His Leu Glu Gly Ile Ser Ser
E--> 1116 305 310 315 320
1118 His Val Gln Asp Thr Phe Pro Leu Gly Gln Ala Gly Ala Cys Gln Glu
E--> 1119 325 330 335

```

RAW SEQUENCE LISTING

DATE: 07/05/2001

PATENT APPLICATION: US/09/786,675

TIME: 15:50:07

Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

```

1121 Asn Ala Ser His Ser Pro Lys Ile Ala Asp Thr Gly Tyr Glu Phe Ile
E--> 1122 340 345 350
1124 Asn Arg Pro Ile Ala Met Arg Pro Leu Phe Asp Ser Met Tyr Leu Gln
E--> 1125 355 360 365
1127 Gln Tyr Val Leu Leu Cys Ser Gln Ile Glu Val Gly Gly Phe Arg Asp
E--> 1128 370 375 380
1130 Lys Pro Gly Lys Gly Arg Asp Tyr Tyr His Thr Cys Tyr Cys Leu Ser
E--> 1131 385 390 395 400
1133 Gly Leu Ser Ile Ala Gln Tyr Ser Trp Thr Asp Glu Ala Asp Ser Thr
E--> 1134 405 410 415
1136 Pro Leu Pro Arg Asp Val Phe Gly Pro Tyr Ser Lys Cys Leu Leu Glu
E--> 1137 420 425 430
1139 Gln Val His Pro Leu Phe Asn Val Val Leu Asp Arg Tyr Tyr Glu Ala
E--> 1140 435 440 445
1142 Arg Glu Tyr Ser Gln Ala Cys Glu Thr Val Ser Pro Leu Ser Leu Ala
E--> 1143 450 455 460
1145 Pro Thr Phe Ser Glu Thr
E--> 1146 465 470
1148 <210> SEQ ID NO: 22
1149 <211> LENGTH: 419
1150 <212> TYPE: PRT
1151 <213> ORGANISM: Pisum sativum
1153 <400> SEQUENCE: 22
1154 Met Glu Ala Ser Thr Ala Ala Glu Thr Pro Thr Pro Thr Val Ser Gln
1155 1 5 10 15
1157 Arg Asp Gln Trp Ile Val Glu Ser Gln Val Phe His Ile Tyr Gln Leu
E--> 1158 20 25 30
1160 Phe Ala Asn Ile Pro Pro Asn Ala Gln Ser Ile Ile Arg Pro Trp Leu
E--> 1161 35 40 45
1163 Cys Tyr Trp Ile Ile His Ser Ile Ala Leu Leu Gly Glu Ser Ile Asp
E--> 1164 50 55 60
1166 Asp Asp Leu Glu Asp Asn Thr Val Asp Phe Leu Asn Arg Cys Gln Asp
E--> 1167 65 70 75 80
1169 Pro Asn Gly Gly Tyr Ala Gly Gly Pro Gly Gln Met Pro His Leu Ala
E--> 1170 85 90 95
1172 Thr Thr Tyr Ala Ala Val Asn Thr Leu Ile Thr Leu Gly Gly Glu Lys
E--> 1173 100 105 110
1175 Ser Leu Ala Ser Ile Asn Arg Asn Lys Leu Tyr Gly Phe Met Arg Arg
E--> 1176 115 120 125
1178 Met Lys Gln Pro Asn Gly Gly Phe Arg Met His Asp Glu Gly Glu Ile
E--> 1179 130 135 140
1181 Asp Val Arg Ala Cys Tyr Thr Ala Ile Ser Val Ala Ser Val Leu Asn
E--> 1182 145 150 155 160
1184 Ile Leu Asp Asp Glu Leu Ile Lys Asn Val Gly Asp Phe Ile Leu Ser
E--> 1185 165 170 175
1187 Cys Gln Thr Tyr Glu Gly Gly Leu Ala Gly Glu Pro Gly Ser Glu Ala
E--> 1188 180 185 190
1190 His Gly Gly Tyr Thr Phe Cys Gly Leu Ala Ala Met Ile Leu Ile Gly
E--> 1191 195 200 205

```

RAW SEQUENCE LISTING

DATE: 07/05/2001

PATENT APPLICATION: US/09/786,675

TIME: 15:50:07

Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

```

1193 Glu Val Asn Arg Leu Asp Leu Pro Arg Leu Leu Asp Trp Val Val Phe
E--> 1194 210                215                220
1196 Arg Gln Gly Lys Glu Cys Gly Phe Gln Gly Arg Thr Asn Lys Leu Val
E--> 1197 225                230                235                240
1199 Asp Gly Cys Tyr Ser Phe Trp Gln Gly Gly Ala Val Ala Leu Leu Gln
E--> 1200 245                250                255
1202 Arg Leu His Ser Ile Ile Asp Glu Gln Met Ala Glu Ala Ser Gln Phe
E--> 1203 260                265                270
1205 Val Thr Val Ser Asp Ala Pro Glu Glu Lys Glu Cys Leu Asp Gly Thr
E--> 1206 275                280                285
1208 Ser Ser His Ala Thr Ser His Ile Arg His Glu Gly Met Asn Glu Ser
E--> 1209 290                295                300
1211 Cys Ser Ser Asp Val Lys Asn Ile Gly Tyr Asn Phe Ile Ser Glu Trp
E--> 1212 305                310                315                320
1214 Arg Gln Ser Glu Pro Leu Phe His Ser Ile Ala Leu Gln Gln Tyr Ile
E--> 1215 325                330                335
1217 Leu Leu Cys Ser Gln Gln Glu Asp Gly Gly Leu Arg Asp Lys Pro Gly
E--> 1218 340                345                350
1220 Lys Arg Arg Asp His Tyr His Ser Cys Tyr Cys Leu Ser Gly Leu Ser
E--> 1221 355                360                365
1223 Leu Cys Gln Tyr Ser Trp Ser Lys Arg Pro Asp Ser Pro Pro Leu Pro
E--> 1224 370                375                380
1226 Lys Val Val Met Gly Pro Tyr Ser Asn Leu Leu Glu Pro Ile His Pro
E--> 1227 385                390                395                400
1229 Leu Phe Asn Val Val Leu Asp Arg Tyr Arg Glu Ala His Glu Phe Phe
E--> 1230 405                410                415
1232 Ser Gln Leu
1235 <210> SEQ ID NO: 23
1236 <211> LENGTH: 419
1237 <212> TYPE: PRT
1238 <213> ORGANISM: Pisum sativum
1240 <400> SEQUENCE: 23
1241 Met Glu Ala Ser Thr Ala Ala Glu Thr Pro Thr Pro Thr Val Ser Gln
1242 1                5                10                15
1244 Arg Asp Gln Trp Ile Val Glu Ser Gln Val Phe His Ile Tyr Gln Leu
E--> 1245 20                25                30
1247 Phe Ala Asn Ile Pro Pro Asn Ala Gln Ser Ile Ile Arg Pro Trp Leu
E--> 1248 35                40                45
1250 Cys Tyr Trp Ile Ile His Ser Ile Ala Leu Leu Gly Glu Ser Ile Asp
E--> 1251 50                55                60
1253 Asp Asp Leu Glu Asp Asn Thr Val Asp Phe Leu Asn Arg Cys Gln Asp
E--> 1254 65                70                75                80
1256 Pro Asn Gly Gly Tyr Ala Gly Gly Pro Gly Gln Met Pro His Leu Ala
E--> 1257 85                90                95
1259 Thr Thr Tyr Ala Ala Val Asn Thr Leu Ile Thr Leu Gly Gly Glu Lys
E--> 1260 100               105                110
1262 Ser Leu Ala Ser Ile Asn Arg Asn Lys Leu Tyr Gly Phe Met Arg Arg
E--> 1263 115               120                125
1265 Met Lys Gln Pro Asn Gly Gly Phe Arg Met His Asp Glu Gly Glu Ile

```


RAW SEQUENCE LISTING

DATE: 07/05/2001

PATENT APPLICATION: US/09/786,675

TIME: 15:50:07

Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

```

E--> 1266 130          135          140
      1268 Asp Val Arg Ala Cys Tyr Thr Ala Ile Ser Val Ala Ser Val Leu Asn
E--> 1269 145          150          155          160
      1271 Ile Leu Asp Asp Glu Leu Ile Lys Asn Val Gly Asp Phe Ile Leu Ser
E--> 1272 165          170          175
      1274 Cys Gln Thr Tyr Glu Gly Gly Leu Ala Gly Glu Pro Gly Ser Glu Ala
E--> 1275 180          185          190
      1277 His Gly Gly Tyr Thr Phe Cys Gly Leu Ala Ala Met Ile Leu Ile Gly
E--> 1278 195          200          205
      1280 Glu Val Asn Arg Leu Asp Leu Pro Arg Leu Leu Asp Trp Val Val Phe
E--> 1281 210          215          220
      1283 Arg Gln Gly Lys Glu Cys Gly Phe Gln Gly Arg Thr Asn Lys Leu Val
E--> 1284 225          230          235          240
      1286 Asp Gly Cys Tyr Ser Phe Trp Gln Gly Gly Ala Val Ala Leu Leu Gln
E--> 1287 245          250          255
      1289 Arg Leu His Ser Ile Ile Asp Glu Gln Met Ala Glu Ala Ser Gln Phe
E--> 1290 260          265          270
      1292 Val Thr Val Ser Asp Ala Pro Glu Glu Lys Glu Cys Leu Asp Gly Thr
E--> 1293 275          280          285
      1295 Ser Ser His Ala Thr Ser His Ile Arg His Glu Gly Met Asn Glu Ser
E--> 1296 290          295          300
      1298 Cys Ser Ser Asp Val Lys Asn Ile Gly Tyr Asn Phe Ile Ser Glu Trp
E--> 1299 305          310          315          320
      1301 Arg Gln Ser Glu Pro Leu Phe His Ser Ile Ala Leu Gln Gln Tyr Ile
E--> 1302 325          330          335
      1304 Leu Leu Cys Ser Gln Glu Gln Asp Gly Gly Leu Arg Asp Lys Pro Gly
E--> 1305 340          345          350
      1307 Lys Arg Arg Asp His Tyr His Ser Cys Tyr Cys Leu Ser Gly Leu Ser
E--> 1308 355          360          365
      1310 Leu Cys Gln Tyr Ser Trp Ser Lys Arg Pro Asp Ser Pro Pro Leu Pro
E--> 1311 370          375          380
      1313 Lys Val Val Met Gly Pro Tyr Ser Asn Leu Leu Glu Pro Ile His Pro
E--> 1314 385          390          395          400
      1316 Leu Phe Asn Val Val Leu Asp Arg Tyr Arg Glu Ala His Glu Phe Phe
E--> 1317 405          410          415
      1319 Ser Gln Leu
E--> 1321 22

```

FSI Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

VERIFICATION SUMMARY

DATE: 07/05/2001

PATENT APPLICATION: US/09/786,675

TIME: 15:50:08

Input Set : A:\BB-1240 Seq Listing.txt

Output Set: N:\CRF3\07032001\I786675.raw

L:11 M:270 C: Current Application Number differs, Replaced Application Number
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:15 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD
L:62 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2
M:332 Repeated in SeqNo=2
L:159 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:4
M:332 Repeated in SeqNo=4
L:260 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:6
M:332 Repeated in SeqNo=6
L:362 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:8
M:332 Repeated in SeqNo=8
L:467 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:10
M:332 Repeated in SeqNo=10
L:563 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:12
M:332 Repeated in SeqNo=12
L:681 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:14
M:332 Repeated in SeqNo=14
L:780 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:16
M:332 Repeated in SeqNo=16
L:879 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:17
L:879 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:891 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:18
M:332 Repeated in SeqNo=18
L:924 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:19
M:332 Repeated in SeqNo=19
L:993 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:20
M:332 Repeated in SeqNo=20
L:1062 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:21
M:332 Repeated in SeqNo=21
L:1158 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:22
M:332 Repeated in SeqNo=22
L:1245 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:23
M:332 Repeated in SeqNo=23